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CONFIDENTIAL

15 April 1959

(IN TRIPLICATE)

SECRET

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Attention: [redacted] 25X1

Subject: Progress Reports, Submission of

Enclosure: (A) Progress Reports for the Month of March 1959, in quadruplicate

Gentlemen:

As required, Enclosure (A), described above, is submitted detailing the progress achieved during the month of March 1959.

In the event further information is desired concerning the enclosed reports, do not hesitate to contact the writer.

Very truly yours,

[redacted] 25X1

[redacted] 25X1

Contract Administrator
NKG:js

CC: [redacted] w/Enclosure 25X1

[redacted] 25X1

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PROGRESS REPORT
FOR
MONTH OF MARCH 1959

TRANSPORTABLE INFLATABLE ANTENNA

Purpose: The scope of this project is to design, develop and test one antenna system for the 350-10,000 mc range and to fabricate and deliver five complete antenna systems with indoor mounts and two interchangeable outdoor mounts.

Personnel: Electrical Engineers:

Mechanical Engineers:

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Status: A full scale final model of the log. periodic primary feed for the 6.5 foot dish was completed. The measured input VSWR in free space was under 2.7:1. The first inflatable dish and support assembly was assembled and tested for mechanical stability. The contour of the inflated dish appears to be very good.

All blowers and hoses have been received as well as a partial order of coax. The remainder of the coax has been promised for 15 April 1959.

A final model of the 2 foot dish was assembled and patterns taken over its frequency range. The half power beamwidths varied from 5.2 degrees at 6000 mc to 3.2 degrees at 10,000 mc. The sidelobes were under 17 db over the entire frequency range. The measured gain at 6000 mc was 27.9 db and 31.2 db at 10,000 mc. These measured values agree very well with the theoretical values.

Future Plans: The VSWR of the log periodic primary feed will be measured in front of its dish. Patterns of the 6.5 foot dish will be taken and the gain measured at several points throughout the band. The VSWR of the horn feed will be checked in conjunction with its dish. The outdoor mount will be assembled and checked mechanically. The system will then be ready to be delivered to the customer.